

Application No.: 09/876,160

Docket No.: 20402-00625-US

REMARKS

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Claims 1 and 12 were rejected under 35 U.S.C. § 112, second paragraph. The lack of antecedent basis pointed out by the Examiner has been corrected in the present amendment

The claims were rejected under 35 U.S.C. § 103(a) as unpatentable over a combination of cited references as follows:

Claims 1, 2 and 8 – Tanaka in view of Cote;
Claims 9-13 – Tanaka in view of Cote and further in view of Korner; and
Claims 1, 3-8 and 11 – Korner in view of Cote.

Claims 1 -13 remain pending in this application. Claims 1, 8 and 11 have been amended to additionally include the constituents of:

“a microphone output terminal connected to an output line through which a microphone signal is outputted;” and

“a bypass capacitor having one end electrically connected to a signal output terminal of the second amplification circuit and having the other end electrically connected to a common output terminal of the second amplification circuit, the bypass capacitor operating to bypass a high frequency signal from outside the microphone.”

The bypass capacitor is shown by the reference “21” in Figs. 1 and 3, and is described in the specification on page 4, lines 31 – 33. The output line is illustrated by the reference “31” in Figs. 1 and 3.

Therefore, it should be clear that the microphone according to the present invention has, as shown in Fig. 1, an output circuit composed of a line extending from the FET 25 to both the terminal 22 and the bypass capacitor 21 and the terminal 22 and the output line 31 extending outward, which is susceptible to impingement of an RF signal, that is, noise.

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The purpose of the present invention is to reduce or suppress an RF signal impinging upon the microphone so that audible noise resulting from the RF signal impinging upon the microphone via both the microphone signal output line 31 and the output terminal 22, which is especially from a transmitter of the radio apparatus, is suppressed or reduced (see the specification, page 2, line 30-34).

As shown in Fig. 1, there is provided the FET 25 (the second amplification circuit) cascaded to the FET 15 (the first amplification circuit). The combination of the FET 25 with the FET 15 functions as a reducer for the RF noise (see the specification, page 7, lines 16-32). In addition, there is provided, as amended, the bypass capacitor 21 placed immediately after the output line 31. Thus the RF signal is first (i.e., mainly) reduced (bypassed) by the bypass capacitor 21, and then reduced through the impedance conversion carried out by the FET 25. This accomplishes a two-step RF-noise suppression electric circuitry against the RF noise, in which the impedance conversion carried out by the FET 25 will help or strengthen, to a large extent, the noise suppression performed by the bypass capacitor 21.

For example, both of the bypass capacitor 21 and the FET 25 can be assigned to different frequencies, so that the coverage of the RF noise suppression can be widened. Alternatively, both of the bypass capacitor 21 and the FET 25 can be in charge of the same frequency, which strengthens the noise suppression at the frequency.

In contrast, Cote (4,443,666) discloses a shielding structure against external electromagnetic waves (noise), but fails to teach or suggest an electrical suppression technique against such external electromagnetic waves.

As explained in the last response, Tanaka et al (4, 491,697) and Korner (6,104,818) both disclose condenser microphones, but they failed to teach countermeasures against RF noise. Tanaka et al only discloses an impedance conversion function using FETs.

Hence it would be improbable for one of ordinary skill in the art to achieve the configurations inherent to the present invention from the cited dereferences.

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Therefore, it is clear that the configurations of Applicant's amended claims are not met by reasonable combinations of Cote, Tanaka et al. and Korner.

In view of the above, consideration and allowance are, therefore, respectfully solicited.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to CBLH Deposit Account No. 22-0185, under Order No. 20402-00625-US from which the undersigned is authorized to draw.

Dated:

3/31/05

Respectfully submitted,

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